

TRAITE DE COOPERATION EN MATIERE DE BREVETS

PCT

NOTIFICATION DE L'ENREGISTREMENT
D'UN CHANGEMENT(règle 92bis.1 et
instruction administrative 422 du PCT)

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| Date d'expédition (jour/mois/année) 15 mars 2001 (15.03.01) |
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| Référence du dossier du déposant ou du mandataire 340067/17542 |
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| Demande internationale no PCT/FR99/01541 |
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Expéditeur: le BUREAU INTERNATIONAL

Destinataire:

MARTIN, Jean-Jacques
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20, rue de Chazelles
F-75847 Paris Cedex 17
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NOTIFICATION IMPORTANTE

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|--|
| Date du dépôt international (jour/mois/année) 25 juin 1999 (25.06.99) |
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1. Les renseignements suivants étaient enregistrés en ce qui concerne:

le déposant l'inventeur le mandataire le représentant commun

| |
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| Nom et adresse |
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2. Le Bureau international notifie au déposant que le changement indiqué ci-après a été enregistré en ce qui concerne:

la personne le nom l'adresse la nationalité le domicile

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| Nom et adresse |
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3. Observations complémentaires, le cas échéant:

4. Une copie de cette notification a été envoyée:

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| <input checked="" type="checkbox"/> à l'office récepteur <input type="checkbox"/> à l'administration chargée de la recherche internationale <input type="checkbox"/> à l'administration chargée de l'examen préliminaire international | <input type="checkbox"/> aux offices désignés concernés <input checked="" type="checkbox"/> aux offices élus concernés <input type="checkbox"/> autre destinataire: |
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| Bureau international de l'OMPI 34, chemin des Colombettes 1211 Genève 20, Suisse |
|--|

no de télécopieur (41-22) 740.14.35

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| Fonctionnaire autorisé: |
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| Margret Fourne-Godbersen |
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PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

| | | |
|---|---|---|
| Applicant's or agent's file reference H2596-HMD | FOR FURTHER ACTION | see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below. |
| International application No. PCT/IB 01/ 02851 | International filing date (day/month/year) 19/12/2001 | (Earliest) Priority Date (day/month/year) 28/12/2000 |
| Applicant HMD SEALLESS PUMPS, LTD. | | |

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :
 - contained in the international application in written form.
 - filed together with the international application in computer readable form.
 - furnished subsequently to this Authority in written form.
 - furnished subsequently to this Authority in computer readable form.
 - the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
 - the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. Certain claims were found unsearchable (See Box I).

3. Unity of invention is lacking (see Box II).

4. With regard to the **title**,

- the text is approved as submitted by the applicant.
- the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- the text is approved as submitted by the applicant.
- the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

- as suggested by the applicant.
- because the applicant failed to suggest a figure.
- because this figure better characterizes the invention.

2

None of the figures.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IB 01/02851

Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)

Difficulties in self-starting a permanent magnet motor are eliminated in a structure including a stator (10) with a rotor journaled within the stator for rotation about an axis. The rotor includes a body of ferromagnetic material (18) having a nominally cylindrical peripheral surface concentric with the axis. Permanent magnets (30,32) are located on the peripheral surface to define equally angularly spaced magnetic poles with alternating ones of the poles being of opposite polarity. A thin, hollow cylinder (36) formed of a good electrically conducting material is disposed on the body to sandwich the magnets against the peripheral surface of the body and provides a situs for the generation of localized induced electrical current which generates magnetic fields that react with rotating magnetic fields in the stator to start the motor from a dead stop without the need for position sensors or controlled electronics.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/IB 01/02851A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H02K21/46 H02K1/27

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H02K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category ° | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|---|-----------------------|
| X | GB 2 271 672 A (UNIV CARDIFF) 20 April 1994 (1994-04-20) | 1,4,10 |
| Y | page 1, line 10 - line 30; claims 1,3; figure 1 ---- | 2,3,5-7, 9 |
| X | PATENT ABSTRACTS OF JAPAN vol. 017, no. 307 (E-1379), 11 June 1993 (1993-06-11) & JP 05 022916 A (TOSHIBA CORP), 29 January 1993 (1993-01-29) abstract ---- | 1,4,10 |
| X | US 4 242 610 A (MCCARTY FREDERICK B ET AL) 30 December 1980 (1980-12-30) | 1,4,5,10 |
| Y | column 3, line 44 - line 61; figure 3 column 3, line 28 - line 30 ---- | 8 -/- |

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

° Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

12 July 2002

Date of mailing of the international search report

29/07/2002

Name and mailing address of the ISA

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Authorized officer

Roy, C

INTERNATIONAL SEARCH REPORT

International Application No

PCT/IB 01/02851

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|----------|--|-----------------------|
| Y | FR 2 769 424 A (THOMSON CSF) 9 April 1999 (1999-04-09) page 2, line 25 - line 27 page 10, line 26 - line 30; figures 3A,3B --- | 2,3,9 |
| Y | US 5 964 028 A (BUSE FREDERIC W) 12 October 1999 (1999-10-12) column 1, line 22; figure 4 column 4, line 7 - line 19 column 4, line 31 - line 32 --- | 2,3 |
| Y | PATENT ABSTRACTS OF JAPAN vol. 2000, no. 04, 31 August 2000 (2000-08-31) & JP 2000 014062 A (DENSO CORP), 14 January 2000 (2000-01-14) abstract --- | 5-7,9 |
| Y | PATENT ABSTRACTS OF JAPAN vol. 014, no. 038 (E-878), 24 January 1990 (1990-01-24) & JP 01 270756 A (AICHI EMASON DENKI KK), 30 October 1989 (1989-10-30) abstract --- | 5,7 |
| Y | US 4 631 435 A (MCCARTY FREDERICK B) 23 December 1986 (1986-12-23) column 7, line 7 - line 30; figure 4 --- | 8 |
| A | PATENT ABSTRACTS OF JAPAN vol. 006, no. 247 (E-146), 7 December 1982 (1982-12-07) & JP 57 145556 A (HITACHI SEISAKUSHO KK), 8 September 1982 (1982-09-08) abstract ----- | 1,10 |

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IB 01/02851

| Patent document cited in search report | | Publication date | | Patent family member(s) | | Publication date |
|--|---|------------------|----------------------|--|--|--|
| GB 2271672 | A | 20-04-1994 | NONE | | | |
| JP 05022916 | A | 29-01-1993 | NONE | | | |
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| US 5964028 | A | 12-10-1999 | US CA GB | 5831364 A 2227663 A1 2323217 A ,B | | 03-11-1998 22-07-1998 16-09-1998 |
| JP 2000014062 | A | 14-01-2000 | NONE | | | |
| JP 01270756 2 | A | | NONE | | | |
| US 4631435 | A | 23-12-1986 | EP JP | 0228872 A1 62147938 A | | 15-07-1987 01-07-1987 |
| JP 57145556 2 | A | | NONE | | | |